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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,156	07/23/2003	Kartik Ramaswamy	005104	9690
			USA/ETCH/DRIE/JB	
			EXAMINER	
			MOORE, KARLA A	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/626,156

Applicant(s)

RAMASWAMY ET AL.

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 8-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0703.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 8-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention (Group II), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/27/05.
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5, 716,486 to Selwyn et al.
5. Selwyn et al. disclose an electrostatic chuck to hold a substrate in a process chamber in Figure 9, the electrostatic chuck comprising: (a) an electrode (38) comprising a wire loop (60) that extends substantially continuously about a perimeter of the electrode and has a radially outwardly facing surface that is substantially rounded; and (b) a dielectric covering the electrode (quartz; column 6, rows 58-65).
6. With respect to claim 2, the wire loop has a substantially circular cross-section (column 7, rows 7-14; Figure 10b).

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7. With respect to claim 3, the substantially circular cross-section has a diameter that is larger than the cross-sectional thickness of the electrode. See Figure 9.

8. With respect to claim 7, although each structure is not explicitly shown, the electrostatic chuck is meant to be placed in a substrate processing apparatus (for instance see column 1, rows 55-64). The apparatus necessarily comprises: a process chamber comprising the electrostatic chuck (as described above) to hold a substrate in the process chamber; a gas distributor to introduce a process gas into the process chamber; a gas energizer to energize the process gas in the process chamber to process the substrate; and a gas exhaust to exhaust the process gas from the process chamber.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Selwyn et al. as applied to claims 1-3 and 7 further in view of U.S. Patent No. 6,101,969 to Niori et al.

12. Selwyn et al. disclose the invention substantially as claimed and as described above.

13. However, Selwyn et al. fail to teach the electrode comprises wire mesh.

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14. Niori et al. disclose the use of a wire mesh electrode for the purpose of having an electrode made of a material with a high melting point that is also easily produced (column 10, rows 35-52).

15. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a wire mesh electrode in Selwyn et al. in order to have an electrode with a high melting point that was also easily produced as taught by Niori et al.

16. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selwyn et al. as applied to claims 1-3 and 7 above in view of additional teachings in disclosed in Selwyn et al.

17. Selwyn et al. disclose the invention substantially as claimed and as described above.

18. However, Selwyn et al. fail to teach a specific sizing of the wire loop.

19. Instead, Selwyn et al. teach that modifications to the wire loop will produce considerably different effects and that the specific configuration for the wire loop should be determined empirically for the specific workpiece to be worked upon (column 6, rows 66 through column 7, row 6).

20. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a wire loop with the appropriate sizing determined empirically to process a desired workpiece as taught by Selwyn et al.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP 5452510 discloses an electrostatic chuck comprising electrodes with rounded edges in order to suppress discharges.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore  
Patent Examiner  
Art Unit 1763  
30 June 2005